GMSEH-2

G025 ~028

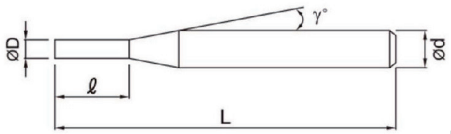
Dao phay mặt phẳng (~65HRC)

New

2-Flute End Mills for Hardened Steels

D≦6 0~-0.012
D>6 0~-0.015

* Thiết kế chuyên dụng để gia công vật liệu có độ cứng cao, cắt khô và cắt tốc độ cao.
* Bề mặt gia công sáng bóng vượt trội.
* Khả năng chống mài mòn cao.



Units : mm

OD (D)	LOC (ℓ)	SD (d)	OAL (L)	Retail Price (VND)
1	3	4	50	–
1.5	4	4	50	–
2	6	4	50	–
2.5	8	4	50	–
3	8	4	50	–
3	8	6	50	–
3.5	10	4	50	–
3.5	10	6	50	–
4	11	4	50	–
4	11	6	50	–
4.5	11	6	50	–
5	13	6	50	–
5.5	13	6	50	–
6	16	6	50	–
6.5	16	8	60	–
7	20	8	60	–
7.5	20	8	60	–
8	20	8	60	–
8.5	20	10	75	–
9	20	10	75	–
9.5	22	10	75	–
10	25	10	75	–
11	30	12	75	–
12	32	12	75	–
14	40	14	100	–
16	40	16	100	–
18	40	18	100	–
20	45	20	100	–

GMSEH-4

G029 ~030

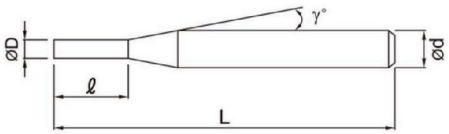
Dao phay mặt phẳng (~65HRC)

New

4-Flute End Mills for Hardened Steels

D≦6 0~-0.012
D>6 0~-0.015

* Thiết kế chuyên dụng để gia công vật liệu có độ cứng cao, cắt khô và cắt tốc độ cao.
* Bề mặt gia công sáng bóng vượt trội.
* Khả năng chống mài mòn cao.



Units : mm

OD (D)	LOC (ℓ)	SD (d)	OAL (L)	Retail Price (VND)
1	3	4	50	–
1.5	4	4	50	–
2	6	4	50	–
2.5	8	4	50	–
3	8	4	50	–
3	8	6	50	–
3.5	10	4	50	–
3.5	10	6	50	–
4	11	4	50	–
4	11	6	50	–
4.5	11	6	50	–
5	13	6	50	–
5.5	13	6	50	–
6	16	6	50	–
6.5	16	8	60	–
7	20	8	60	–
7.5	20	8	60	–
8	20	8	60	–
8.5	20	10	75	–
9	20	10	75	–
9.5	22	10	75	–
10	25	10	75	–
11	30	12	75	–
12	32	12	75	–
14	40	14	100	–
16	40	16	100	–
18	40	18	100	–
20	45	20	100	–

GMSRH-4

G031 ~032

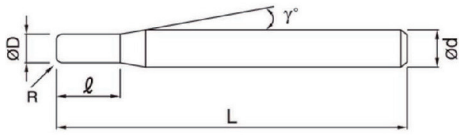
Dao phay góc bo R (~65HRC)

New

4-Flute Radius End Mills for Hardened Steels

4 CORNER R SD h5 R ±0.01 OD D≦6 0~-0.012 D>6 0~-0.015

* Thiết kế chuyên dụng để gia công vật liệu có độ cứng cao, cắt khô và cắt tốc độ cao.
* Bề mặt gia công sáng bóng vượt trội.
* Khả năng chống mài mòn cao.



Units : mm

OD (D)	Corner Radius (R)	LOC (ℓ)	SD (d)	OAL (L)	Retail Price (VND)
3	0.2	8	6	50	–
3	0.2	8	4	50	–
3	0.3	8	6	50	–
3	0.3	8	4	50	–
3	0.5	8	6	50	–
3	0.5	8	4	50	–
4	0.2	11	6	50	–
4	0.2	11	4	50	–
4	0.3	11	6	50	–
4	0.3	11	4	50	–
4	0.5	11	6	50	–
4	0.5	11	4	50	–
4	1	11	6	50	–
4	1	11	4	50	–
5	0.2	13	6	50	–
5	0.3	13	6	50	–
5	0.5	13	6	50	–
5	1	13	6	50	–
6	0.2	16	6	50	–
6	0.3	16	6	50	–

OD (D)	Corner Radius (R)	LOC (ℓ)	SD (d)	OAL (L)	Retail Price (VND)
6	0.5	16	6	50	–
6	1	16	6	50	–
8	0.3	20	8	60	–
8	0.5	20	8	60	–
8	1	20	8	60	–
8	1.5	20	8	60	–
8	2	20	8	60	–
10	0.3	25	10	75	–
10	0.5	25	10	75	–
10	1	25	10	75	–
10	1.5	25	10	75	–
10	2	25	10	75	–
10	2.5	25	10	75	–
12	0.5	32	12	75	–
12	1	32	12	75	–
12	1.5	32	12	75	–
12	2	32	12	75	–
12	2.5	32	12	75	–
12	3	32	12	75	–

GMHRH-2

G033 ~036

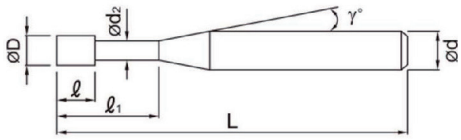
Dao phay rãnh sâu (~65HRC)

New

2-Flute Long Neck End Mills for Hardened Steels

D≤6 0~-0.012
D>6 0~-0.015

* Thiết kế chuyên dụng để gia công vật liệu có độ cứng cao, cắt khô và cắt tốc độ cao.
* Bề mặt gia công sáng bóng vượt trội.
* Khả năng chống mài mòn cao.



Units : mm

OD (D)	Effective Length (ℓ1)	LOC (ℓ)	Neck Dia. (d2)	SD (d)	OAL (L)	Retail Price (VND)
0.4	1	0.6	0.37	4	45	–
0.4	2	0.6	0.37	4	45	–
0.4	3	0.6	0.37	4	45	–
0.4	4	0.6	0.37	4	45	–
0.4	5	0.6	0.37	4	45	–
0.5	2	0.7	0.45	4	45	–
0.5	3	0.7	0.45	4	45	–
0.5	4	0.7	0.45	4	45	–
0.5	6	0.7	0.45	4	45	–
0.5	8	0.7	0.45	4	45	–
0.6	2	0.9	0.55	4	45	–
0.6	3	0.9	0.55	4	45	–
0.6	4	0.9	0.55	4	45	–
0.6	6	0.9	0.55	4	45	–
0.6	8	0.9	0.55	4	45	–
0.6	10	0.9	0.55	4	45	–
0.7	2	1	0.65	4	45	–
0.7	4	1	0.65	4	45	–
0.7	6	1	0.65	4	45	–
0.7	8	1	0.65	4	45	–
0.7	10	1	0.65	4	45	–
0.8	2	1.2	0.75	4	45	–
0.8	4	1.2	0.75	4	45	–
0.8	6	1.2	0.75	4	45	–
0.8	8	1.2	0.75	4	45	–
0.8	10	1.2	0.75	4	45	–
0.8	12	1.2	0.75	4	45	–
0.9	6	1.4	0.85	4	45	–
0.9	8	1.4	0.85	4	45	–
0.9	10	1.4	0.85	4	45	–

OD (D)	Effective Length (ℓ1)	LOC (ℓ)	Neck Dia. (d2)	SD (d)	OAL (L)	Retail Price (VND)
0.9	15	1.4	0.85	4	50	–
1	4	1.5	0.95	4	45	–
1	5	1.5	0.95	4	45	–
1	6	1.5	0.95	4	45	–
1	8	1.5	0.95	4	45	–
1	10	1.5	0.95	4	45	–
1	12	1.5	0.95	4	45	–
1	14	1.5	0.95	4	50	–
1	16	1.5	0.95	4	50	–
1	20	1.5	0.95	4	55	–
1.2	4	1.8	1.15	4	45	–
1.2	6	1.8	1.15	4	45	–
1.2	8	1.8	1.15	4	45	–
1.2	10	1.8	1.15	4	45	–
1.2	12	1.8	1.15	4	45	–
1.2	16	1.8	1.15	4	50	–
1.4	6	2.1	1.35	4	45	–
1.4	8	2.1	1.35	4	45	–
1.4	10	2.1	1.35	4	45	–
1.4	12	2.1	1.35	4	45	–
1.4	14	2.1	1.35	4	50	–
1.4	16	2.1	1.35	4	50	–
1.4	22	2.1	1.35	4	55	–
1.5	6	2.3	1.45	4	45	–
1.5	8	2.3	1.45	4	45	–
1.5	10	2.3	1.45	4	45	–
1.5	12	2.3	1.45	4	45	–
1.5	14	2.3	1.45	4	50	–
1.5	16	2.3	1.45	4	50	–
1.5	18	2.3	1.45	4	55	–

GMHRH-2

G033 ~036

Dao phay rãnh sâu (~65HRC)

New

2-Flute Long Neck End Mills for Hardened Steels

Units : mm

OD (D)	Effective Length (ℓ_1)	LOC (ℓ)	Neck Dia. (d_2)	SD (d)	OAL (L)	Retail Price (VND)
1.5	20	2.3	1.45	4	55	–
1.6	6	2.4	1.55	4	45	–
1.6	8	2.4	1.55	4	45	–
1.6	10	2.4	1.55	4	45	–
1.6	12	2.4	1.55	4	45	–
1.6	14	2.4	1.55	4	50	–
1.6	16	2.4	1.55	4	50	–
1.6	18	2.4	1.55	4	55	–
1.6	20	2.4	1.55	4	55	–
1.6	26	2.4	1.55	4	60	–
1.8	6	2.7	1.75	4	45	–
1.8	8	2.7	1.75	4	45	–
1.8	10	2.7	1.75	4	45	–
1.8	12	2.7	1.75	4	45	–
1.8	14	2.7	1.75	4	50	–
1.8	16	2.7	1.75	4	50	–
1.8	18	2.7	1.75	4	55	–
1.8	20	2.7	1.75	4	55	–
1.8	26	2.7	1.75	4	65	–
2	6	3	1.95	4	45	–
2	8	3	1.95	4	45	–
2	10	3	1.95	4	45	–
2	12	3	1.95	4	45	–
2	14	3	1.95	4	50	–
2	16	3	1.95	4	50	–
2	18	3	1.95	4	55	–
2	20	3	1.95	4	55	–
2	22	3	1.95	4	60	–
2	26	3	1.95	4	60	–
2	30	3	1.95	4	70	–
2.5	8	3.7	2.4	4	45	–
2.5	10	3.7	2.4	4	45	–
2.5	12	3.7	2.4	4	45	–
2.5	14	3.7	2.4	4	50	–
2.5	16	3.7	2.4	4	55	–
2.5	18	3.7	2.4	4	55	–
2.5	20	3.7	2.4	4	60	–
2.5	26	3.7	2.4	4	70	–
2.5	30	3.7	2.4	4	80	–
3	8	4.5	2.85	6	45	–
3	10	4.5	2.85	6	45	–
3	12	4.5	2.85	6	50	–
3	14	4.5	2.85	6	50	–
3	16	4.5	2.85	6	55	–
3	18	4.5	2.85	6	55	–
3	20	4.5	2.85	6	60	–
3	26	4.5	2.85	6	70	–
3	30	4.5	2.85	6	70	–
3	36	4.5	2.85	6	80	–
3	40	4.5	2.85	6	90	–
4	10	6	3.85	6	50	–
4	12	6	3.85	6	50	–
4	16	6	3.85	6	60	–
4	20	6	3.85	6	60	–
4	26	6	3.85	6	70	–
4	30	6	3.85	6	70	–
4	36	6	3.85	6	80	–
4	40	6	3.85	6	90	–
4	46	6	3.85	6	90	–
4	50	6	3.85	6	100	–
5	16	7.5	4.85	6	60	–
5	20	7.5	4.85	6	60	–
5	26	7.5	4.85	6	70	–
5	30	7.5	4.85	6	80	–
5	36	7.5	4.85	6	80	–
5	40	7.5	4.85	6	80	–
5	50	7.5	4.85	6	110	–
6	20	9	5.85	6	80	–
6	30	9	5.85	6	90	–
6	40	9	5.85	6	100	–
6	50	9	5.85	6	110	–

GMRBH-2

~65 HRC MG DATA G037 ~038

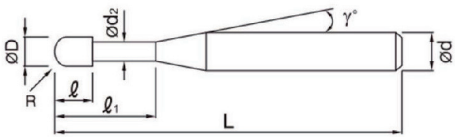
Dao phay cầu rãnh sâu (~65HRC)

New

2-Flute Long Neck Ball End Mills for Hardened Steels

R≦3±0.005 R>3±0.01 D≦6 0~-0.012 D>6 0~-0.015

* Thiết kế chuyên dụng để gia công vật liệu có độ cứng cao, cắt khô và cắt tốc độ cao.
* Bề mặt gia công sáng bóng vượt trội.
* Khả năng chống mài mòn cao.



Units : mm

Radius (R)	Effective Length (ℓ_1)	LOC (ℓ)	Neck Dia. (d_2)	SD (d)	OAL (L)	NO. of Flute (T)	Retail Price (VND)
0.2	0.5	0.4	0.37	0.4	4	45	–
0.2	1	0.4	0.37	0.4	4	45	–
0.2	1.5	0.4	0.37	0.4	4	45	–
0.2	2	0.4	0.37	0.4	4	45	–
0.2	3	0.4	0.37	0.4	4	45	–
0.2	4	0.4	0.37	0.4	4	45	–
0.2	5	0.4	0.37	0.4	4	45	–
0.25	1	0.5	0.45	0.5	4	45	–
0.5	2	0.5	0.45	0.5	4	45	–
0.25	3	0.5	0.45	0.5	4	45	–
0.25	4	0.5	0.45	0.5	4	45	–
0.25	5	0.5	0.45	0.5	4	45	–
0.25	6	0.5	0.45	0.5	4	45	–
0.25	8	0.5	0.45	0.5	4	45	–
0.3	1	0.6	0.55	0.6	4	45	–
0.3	2	0.6	0.55	0.6	4	45	–
0.3	3	0.6	0.55	0.6	4	45	–
0.3	4	0.6	0.55	0.6	4	45	–
0.3	5	0.6	0.55	0.6	4	45	–
0.3	6	0.6	0.55	0.6	4	45	–
0.3	8	0.6	0.55	0.6	4	45	–
0.3	10	0.6	0.55	0.6	4	45	–
0.4	2	0.8	0.75	0.8	4	45	–
0.4	4	0.8	0.75	0.8	4	45	–
0.4	6	0.8	0.75	0.8	4	45	–
0.4	8	0.8	0.75	0.8	4	45	–
0.4	10	0.8	0.75	0.8	4	45	–
0.5	3	1	0.95	1	4	45	–
0.5	4	1	0.95	1	4	45	–
0.5	5	1	0.95	1	4	45	–

GMRBH-2

G037 ~038

Dao phay cầu rãnh sâu (~65HRC)

New

2-Flute Long Neck Ball End Mills for Hardened Steels

Units : mm

Radius (R)	Effective Length (ℓ_1)	LOC (ℓ)	Neck Dia. (d_2)	SD (d)	OAL (L)	NO. of Flute (T)	Retail Price (VND)
0.5	6	1	0.95	1	4	45	–
0.5	7	1	0.95	1	4	45	–
0.5	8	1	0.95	1	4	45	–
0.5	10	1	0.95	1	4	45	–
0.5	12	1	0.95	1	4	45	–
0.5	14	1	0.95	1	4	50	–
0.5	16	1	0.95	1	4	50	–
0.5	20	1	0.95	1	4	55	–
0.6	4	1.2	1.15	1.2	4	45	–
0.6	6	1.2	1.15	1.2	4	45	–
0.6	8	1.2	1.15	1.2	4	45	–
0.6	10	1.2	1.15	1.2	4	45	–
0.6	12	1.2	1.15	1.2	4	45	–
0.7	8	1.4	1.35	1.4	4	45	–
0.7	12	1.4	1.35	1.4	4	45	–
0.7	16	1.4	1.35	1.4	4	50	–
0.75	4	1.5	1.45	1.5	4	45	–
0.75	6	1.5	1.45	1.5	4	45	–
0.75	8	1.5	1.45	1.5	4	45	–
0.75	10	1.5	1.45	1.5	4	45	–
0.75	12	1.5	1.45	1.5	4	45	–
0.75	14	1.5	1.45	1.5	4	50	–
0.75	16	1.5	1.45	1.5	4	50	–
0.75	20	1.5	1.45	1.5	4	55	–
0.8	8	1.6	1.55	1.6	4	45	–
0.8	12	1.6	1.55	1.6	4	45	–
0.8	16	1.6	1.55	1.6	4	50	–
0.8	20	1.6	1.55	1.6	4	55	–
0.9	8	1.8	1.75	1.8	4	45	–
0.9	12	1.8	1.75	1.8	4	45	–
0.9	16	1.8	1.75	1.8	4	50	–
0.9	20	1.8	1.75	1.8	4	55	–
1	4	2	1.95	2	4	45	–
1	6	2	1.95	2	4	45	–
1	8	2	1.95	2	4	45	–
1	10	2	1.95	2	4	45	–
1	12	2	1.95	2	4	50	–
1	14	2	1.95	2	4	50	–
1	16	2	1.95	2	4	50	–

GMRBH-2

G037 ~038

Dao phay cầu rãnh sâu (~65HRC)

New

2-Flute Long Neck Ball End Mills for Hardened Steels

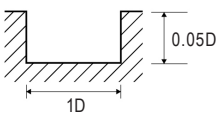
Units : mm

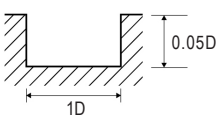
Radius (R)	Effective Length (ℓ_1)	LOC (ℓ)	Neck Dia. (d_2)	SD (d)	OAL (L)	NO. of Flute (T)	Retail Price (VND)
1	18	2	1.95	2	4	55	–
1	20	2	1.95	2	4	55	–
1	22	2	1.95	2	4	60	–
1	26	2	1.95	2	4	70	–
1	30	2	1.95	2	4	70	–
1.25	8	2.5	2.4	2.5	6	50	–
1.25	10	2.5	2.4	2.5	6	50	–
1.25	16	2.5	2.4	2.5	6	55	–
1.25	20	2.5	2.4	2.5	6	60	–
1.5	8	3	2.85	3	6	50	–
1.5	10	3	2.85	3	6	50	–
1.5	12	3	2.85	3	6	50	–
1.5	14	3	2.85	3	6	55	–
1.5	16	3	2.85	3	6	55	–
1.5	18	3	2.85	3	6	60	–
1.5	20	3	2.85	3	6	60	–
1.5	26	3	2.85	3	6	70	–
1.5	30	3	2.85	3	6	70	–
1.5	36	3	2.85	3	6	80	–
2	10	4	3.85	4	6	60	–
2	12	4	3.85	4	6	60	–
2	16	4	3.85	4	6	60	–
2	20	4	3.85	4	6	65	–
2	26	4	3.85	4	6	70	–
2	30	4	3.85	4	6	70	–
2	36	4	3.85	4	6	80	–
2	40	4	3.85	4	6	90	–
2	46	4	3.85	4	6	90	–
2	50	4	3.85	4	6	100	–
2.5	16	5	4.85	5	6	60	–
2.5	20	5	4.85	5	6	60	–
2.5	26	5	4.85	5	6	70	–
2.5	30	5	4.85	5	6	80	–
2.5	36	5	4.85	5	6	80	–
3	20	6	5.85	6	6	80	–
3	30	6	5.85	6	6	90	–
3	40	6	5.85	6	6	100	–
3	50	6	5.85	6	6	110	–

GMSEH-2

Slotting

Recommended Cutting Condition

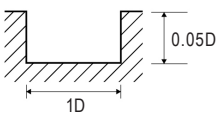
Work material	Non-Alloy Steels (~ 32HRC)				Low Alloy Steels (32 ~ 38HRC)				High Alloyed Steels · Tool Steels (~ 35HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	18,900	275	59	0.007	18,900	275	59	0.007	18,900	275	59	0.007
2	13,100	315	82	0.012	13,100	315	82	0.012	13,100	315	82	0.012
3	8,600	315	81	0.018	8,600	315	81	0.018	8,600	315	81	0.018
4	6,550	325	82	0.025	6,550	325	82	0.025	6,550	325	82	0.025
5	6,200	370	97	0.03	6,200	370	97	0.03	6,200	370	97	0.03
6	5,150	345	97	0.033	5,150	345	97	0.033	5,150	345	97	0.033
8	3,900	345	98	0.044	3,900	345	98	0.044	3,900	345	98	0.044
10	3,050	315	96	0.052	3,050	315	96	0.052	3,050	315	96	0.052
12	2,600	315	98	0.061	2,600	315	98	0.061	2,600	315	98	0.061
Cutting Depth D=OD												

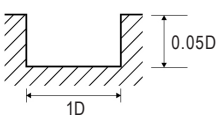
Work material	High Alloyed Steels · Tool Steels (~ 35HRC)				Hardened Steels (~ 55HRC)				Hardened Steels (~ 55HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	14,950	210	47	0.007	14,950	210	47	0.007	10,050	135	32	0.007
2	10,250	250	64	0.012	10,250	250	64	0.012	6,900	160	43	0.012
3	6,800	250	64	0.018	6,800	250	64	0.018	4,550	160	43	0.018
4	5,200	265	65	0.025	5,200	265	65	0.025	3,450	170	43	0.025
5	4,900	295	77	0.03	4,900	295	77	0.03	3,250	190	51	0.029
6	4,050	285	76	0.035	4,050	285	76	0.035	2,700	180	51	0.033
8	3,050	265	77	0.043	3,050	265	77	0.043	2,050	170	52	0.041
10	2,450	250	77	0.051	2,450	250	77	0.051	1,600	160	50	0.05
12	2,050	250	77	0.061	2,050	250	77	0.061	1,400	160	53	0.057
Cutting Depth D=OD												

GMSEH-2

Slotting

Recommended Cutting Condition

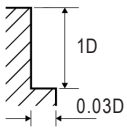
Work material	Hardened Steels							
	(～ 60HRC)				(～ 60HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	8,050	85	25	0.005	6,300	55	20	0.004
2	5,700	95	36	0.008	4,350	60	27	0.007
3	3,750	95	35	0.013	2,950	60	28	0.01
4	2,850	100	36	0.018	2,200	65	28	0.015
5	2,500	105	39	0.021	2,000	65	31	0.016
6	2,100	105	40	0.025	1,650	65	31	0.02
8	1,600	95	40	0.03	1,250	65	31	0.026
10	1,250	90	39	0.036	1,000	55	31	0.028
12	1,050	90	40	0.043	850	55	32	0.032
Cutting Depth D=OD								

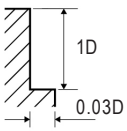
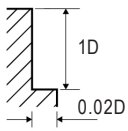
Work material	Chilled Cast Iron				Hardened Cast Iron			
	(～ 42HRC)				(～ 55HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	14,950	210	47	0.007	10,050	135	32	0.007
2	10,250	250	64	0.012	6,900	160	43	0.012
3	6,800	250	64	0.018	4,550	160	43	0.018
4	5,200	265	65	0.025	3,450	170	43	0.025
5	4,900	295	77	0.03	3,250	190	51	0.029
6	4,050	285	76	0.035	2,700	180	51	0.033
8	3,050	265	77	0.043	2,050	170	52	0.041
10	2,450	250	77	0.051	1,600	160	50	0.05
12	2,050	250	77	0.061	1,400	160	53	0.057
Cutting Depth D=OD								

GMSEH-2

Side Milling

Recommended Cutting Condition

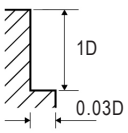
Work material	Non-Alloy Steels (~ 32HRC)				Low Alloy Steels (32 ~ 38HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	18,900	390	59	0.01	18,900	390	59	0.01
2	13,100	440	82	0.017	13,100	440	82	0.017
3	8,600	440	81	0.026	8,600	440	81	0.026
4	6,550	460	82	0.035	6,550	460	82	0.035
5	6,200	535	97	0.043	6,200	535	97	0.043
6	5,150	500	97	0.049	5,150	500	97	0.049
8	3,900	490	98	0.063	3,900	490	98	0.063
10	3,050	440	96	0.072	3,050	440	96	0.072
12	2,600	440	98	0.085	2,600	440	98	0.085
Cutting Depth D=OD								

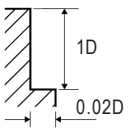
Work material	High Alloyed Steels · Tool Steels (~ 35HRC)				(~ 35HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	18,900	390	59	0.01	14,950	305	47	0.01
2	13,100	440	82	0.017	10,250	355	64	0.017
3	8,600	440	81	0.026	6,800	355	64	0.026
4	6,550	460	82	0.035	5,200	370	65	0.036
5	6,200	535	97	0.043	4,900	425	77	0.043
6	5,150	500	97	0.049	4,050	410	76	0.051
8	3,900	490	98	0.063	3,050	380	77	0.062
10	3,050	440	96	0.072	2,450	355	77	0.072
12	2,600	440	98	0.085	2,050	355	77	0.087
Cutting Depth D=OD								

GMSEH-2

Side Milling

Recommended Cutting Condition

Work material	Hardened Steels											
	(~ 55HRC)				(~ 55HRC)				(~ 60HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	14,950	305	47	0.01	10,050	190	32	0.009	8,050	115	25	0.007
2	10,250	355	64	0.017	6,900	220	43	0.016	5,700	135	36	0.012
3	6,800	355	64	0.026	4,550	220	43	0.024	3,750	135	35	0.018
4	5,200	370	65	0.036	3,450	230	43	0.033	2,850	140	36	0.025
5	4,900	425	77	0.043	3,250	265	51	0.041	2,500	145	39	0.029
6	4,050	410	76	0.051	2,700	250	51	0.046	2,100	145	40	0.035
8	3,050	380	77	0.062	2,050	230	52	0.056	1,600	135	40	0.042
10	2,450	355	77	0.072	1,600	220	50	0.069	1,250	125	39	0.05
12	2,050	355	77	0.087	1,400	220	53	0.079	1,050	125	40	0.06
Cutting Depth D=OD												

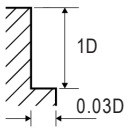
Work material	Hardened Steels				Chilled Cast Iron				Hardened Cast Iron			
	(~ 60HRC)				(~ 42HRC)				(~ 55HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	6,300	75	20	0.006	14,950	305	47	0.01	10,050	190	32	0.009
2	4,350	85	27	0.01	10,250	355	64	0.017	6,900	220	43	0.016
3	2,950	85	28	0.014	6,800	355	64	0.026	4,550	220	43	0.024
4	2,200	90	28	0.02	5,200	370	65	0.036	3,450	230	43	0.033
5	2,000	95	31	0.024	4,900	425	77	0.043	3,250	265	51	0.041
6	1,650	95	31	0.029	4,050	410	76	0.051	2,700	250	51	0.046
8	1,250	85	31	0.034	3,050	380	77	0.062	2,050	230	52	0.056
10	1,000	85	31	0.043	2,450	355	77	0.072	1,600	220	50	0.069
12	850	85	32	0.05	2,050	355	77	0.087	1,400	220	53	0.079
Cutting Depth D=OD												

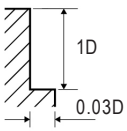
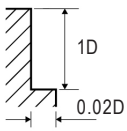
Mục Lục Index
Mũi Taro Taps
Mũi Khoan Drills
Dao Doa Reamers
Dao Phay SUPER Coating
Dao Phay SUPER PRO
Dao Phay HSSCo8
Dao Phay Diamond Coating
Phụ lục Appendix

GMSEH-4

Side Milling

Recommended Cutting Condition

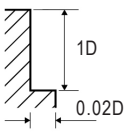
Work material	Non-Alloy Steels (~ 32HRC)				Low Alloy Steels (32 ~ 38HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	25,200	850	79	0.008	25,200	850	79	0.008
2	17,500	1,010	110	0.014	17,500	1,010	110	0.014
3	11,450	1,010	108	0.022	11,450	1,010	108	0.022
4	8,750	1,040	110	0.03	8,750	1,040	110	0.03
5	8,250	1,155	130	0.035	8,250	1,155	130	0.035
6	6,900	1,125	130	0.041	6,900	1,125	130	0.041
8	5,200	1,080	131	0.052	5,200	1,080	131	0.052
10	4,100	1,010	129	0.062	4,100	1,010	129	0.062
12	3,500	1,010	132	0.072	3,500	1,010	132	0.072
16	2,550	865	128	0.085	2,550	865	128	0.085
20	2,050	750	129	0.091	2,050	750	129	0.091
Cutting Depth D=OD								

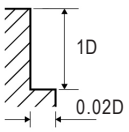
Work material	High Alloyed Steels · Tool Steels (~ 35HRC)				(~ 35HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	25,200	850	79	0.008	19,950	610	63	0.008
2	17,500	1,010	110	0.014	13,650	620	86	0.011
3	11,450	1,010	108	0.022	9,100	725	86	0.02
4	8,750	1,040	110	0.03	6,950	750	87	0.027
5	8,250	1,155	130	0.035	6,550	865	103	0.033
6	6,900	1,125	130	0.041	5,450	810	103	0.037
8	5,200	1,080	131	0.052	4,100	775	103	0.047
10	4,100	1,010	129	0.062	3,250	725	102	0.056
12	3,500	1,010	132	0.072	2,750	725	104	0.066
16	2,550	865	128	0.085	2,050	635	103	0.077
20	2,050	750	129	0.091	1,650	555	104	0.084
Cutting Depth D=OD								

GMSEH-4

Side Milling

Recommended Cutting Condition

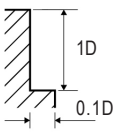
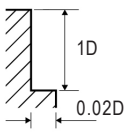
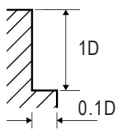
Work material	Hardened Steels											
	(~ 55HRC)				(~ 55HRC)				(~ 60HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	19,950	610	63	0.008	13,400	410	42	0.008	10,750	250	34	0.006
2	13,650	620	86	0.011	9,200	485	58	0.013	7,600	305	48	0.01
3	9,100	725	86	0.02	6,050	485	57	0.02	5,000	305	47	0.015
4	6,950	750	87	0.027	4,600	505	58	0.027	3,800	315	48	0.021
5	6,550	865	103	0.033	4,350	580	68	0.033	3,350	335	53	0.025
6	5,450	810	103	0.037	3,600	545	68	0.038	2,800	325	53	0.029
8	4,100	775	103	0.047	2,750	520	69	0.047	2,100	305	53	0.036
10	3,250	725	102	0.056	2,150	485	68	0.056	1,700	275	53	0.04
12	2,750	725	104	0.066	1,850	485	70	0.066	1,400	275	53	0.049
16	2,050	635	103	0.077	1,350	420	68	0.078	1,050	240	53	0.057
20	1,650	555	104	0.084	1,100	380	69	0.086	850	220	53	0.065
Cutting Depth D=OD												

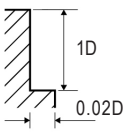
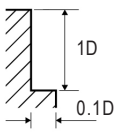
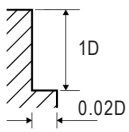
Work material	Hardened Steels				Chilled Cast Iron				Hardened Cast Iron			
	(~ 60HRC)				(~ 42HRC)				(~ 55HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
1	8,400	160	26	0.005	19,950	610	63	0.008	13,400	410	42	0.008
2	5,800	190	36	0.008	13,650	620	86	0.011	9,200	485	58	0.013
3	3,950	190	37	0.012	9,100	725	86	0.02	6,050	485	57	0.02
4	2,950	195	37	0.017	6,950	750	87	0.027	4,600	505	58	0.027
5	2,700	215	42	0.02	6,550	865	103	0.033	4,350	580	68	0.033
6	2,200	200	41	0.023	5,450	810	103	0.037	3,600	545	68	0.038
8	1,700	190	43	0.028	4,100	775	103	0.047	2,750	520	69	0.047
10	1,350	180	42	0.033	3,250	725	102	0.056	2,150	485	68	0.056
12	1,100	175	41	0.04	2,750	725	104	0.066	1,850	485	70	0.066
16	850	160	43	0.047	2,050	635	103	0.077	1,350	420	68	0.078
20	700	145	44	0.052	1,650	555	104	0.084	1,100	380	69	0.086
Cutting Depth D=OD												

GMSRH-4

Slotting

Recommended Cutting Condition

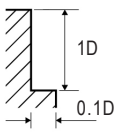
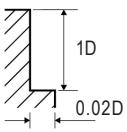
Work material	Non-Alloy Steels (～ 28HRC)				Non-Alloy Steels (～ 32HRC)				Low Alloy Steels (10 ～ 29HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
3	9,350	335	88	0.009	5,850	210	55	0.009	9,350	335	88	0.009
4	7,950	600	100	0.019	4,850	370	61	0.019	7,950	600	100	0.019
5	6,600	630	104	0.024	3,950	380	62	0.024	6,600	630	104	0.024
6	5,850	695	110	0.03	3,550	430	67	0.03	5,850	695	110	0.03
8	4,400	745	111	0.042	2,650	400	67	0.038	4,400	745	111	0.042
10	3,400	640	107	0.047	2,100	315	66	0.038	3,400	640	107	0.047
12	2,900	545	109	0.047	1,750	265	66	0.038	2,900	545	109	0.047
Cutting Depth D=OD												

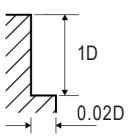
Work material	Low Alloy Steels (～ 35HRC)				High Alloyed Steels ·Tool Steels (～ 55HRC)				(～ 55HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
3	5,850	210	55	0.009	9,350	335	88	0.009	5,850	210	55	0.009
4	4,850	370	61	0.019	7,950	600	100	0.019	4,850	370	61	0.019
5	3,950	380	62	0.024	6,600	630	104	0.024	3,950	380	62	0.024
6	3,550	430	67	0.03	5,850	695	110	0.03	3,550	430	67	0.03
8	2,650	400	67	0.038	4,400	745	111	0.042	2,650	400	67	0.038
10	2,100	315	66	0.038	3,400	640	107	0.047	2,100	315	66	0.038
12	1,750	265	66	0.038	2,900	545	109	0.047	1,750	265	66	0.038
Cutting Depth D=OD												

GMSRH-4

Slotting

Recommended Cutting Condition

Work material	Stainless Steels								Hardened Steels			
	(~ 10HRC)				(~ 55HRC)				(~ 60HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
3	4,850	180	46	0.009	3,550	65	33	0.005	2,000	55	19	0.007
4	4,050	295	51	0.018	3,100	65	39	0.005	1,550	55	19	0.009
5	3,300	315	52	0.024	2,450	75	38	0.008	1,300	55	20	0.011
6	3,000	345	57	0.029	2,100	85	40	0.01	1,150	55	22	0.012
8	2,200	370	55	0.042	1,750	115	44	0.016	900	55	23	0.015
10	1,750	315	55	0.045	1,450	95	46	0.016	700	40	22	0.014
12	1,450	250	55	0.043	1,200	85	45	0.018	600	40	23	0.017
Cutting Depth D=OD												

Work material	Chilled Cast Iron				Hardened Cast Iron			
	(~ 42HRC)				(~ 55HRC)			
OD	RPM	Feed	Vc	fz	RPM	Feed	Vc	fz
	min^{-1}	mm/min	m/min	mm	min^{-1}	mm/min	m/min	mm
3	5,850	210	55	0.009	3,550	65	33	0.005
4	4,850	370	61	0.019	3,100	65	39	0.005
5	3,950	380	62	0.024	2,450	75	38	0.008
6	3,550	430	67	0.03	2,100	85	40	0.01
8	2,650	400	67	0.038	1,750	115	44	0.016
10	2,100	315	66	0.038	1,450	95	46	0.016
12	1,750	265	66	0.038	1,200	85	45	0.018
Cutting Depth D=OD								

Mục Lục Index
Mũi Taro Taps
Mũi Khoan Drills
Dao Doa Reamers
Dao Phay SUPER Coating
Dao Phay SUPER PRO
Dao Phay HSSCo8
Dao Phay Diamond Coating
Phụ lục Appendix

GMHRH-2

Side Milling

Recommended Cutting Condition

Work material	Non-Alloy Steels									
	(~ 28HRC)					(~ 32HRC)				
OD	RPM	Feed	Vc	fz	Cutting Depth	RPM	Feed	Vc	fz	Cutting Depth
	min^{-1}	mm/min	m/min	mm	ap mm	min^{-1}	mm/min	m/min	mm	ap mm
0.4	40,550 ~45,650	275 ~ 530	51 ~57	0.003 ~0.006	0.007 ~0.018	29,500 ~32,600	125 ~410	37 ~41	0.002 ~0.006	0.007 ~0.018
0.5	31,200 ~39,700	275 ~ 530	49 ~62	0.004 ~0.007	0.009 ~0.022	29,500 ~32,600	125 ~410	46 ~51	0.002 ~0.006	0.009 ~0.022
0.6	31,200 ~39,700	340 ~ 690	59 ~75	0.005 ~0.009	0.011 ~0.026	29,500 ~32,600	115 ~530	56 ~61	0.002 ~0.008	0.011 ~0.026
0.7	31,200 ~39,700	340 ~ 690	69 ~87	0.005 ~0.009	0.012 ~0.031	29,500 ~32,600	115 ~530	65 ~72	0.002 ~0.008	0.012 ~0.031
0.8	26,950 ~34.950	380 ~ 795	68 ~88	0.007 ~0.011	0.014 ~0.035	25,200 ~28,250	125 ~580	63 ~71	0.002 ~0.01	0.014 ~0.035
0.9	24,550 ~31,200	380 ~ 550	69 ~88	0.008 ~0.009	0.03 ~0.06	23,350 ~26,100	170 ~650	66 ~74	0.004 ~0.012	0.03 ~0.06
1	22,700 ~28,350	380 ~ 550	71 ~89	0.008 ~0.01	0.045 ~0.09	20,250 ~22,800	200 ~715	64 ~72	0.005 ~0.016	0.045 ~0.09
1.2	18,450 ~22,700	380 ~1,075	70 ~86	0.01 ~0.024	0.055 ~0.1	17,200 ~18,450	200 ~715	65 ~70	0.006 ~0.019	0.055 ~0.1
1.4	16,050 ~19,850	380 ~1,075	71 ~87	0.012 ~0.027	0.062 ~0.125	14,750 ~16,300	200 ~715	65 ~72	0.007 ~0.022	0.062 ~0.125
1.5	14,650 ~18,900	380 ~1,075	69 ~89	0.013 ~0.028	0.07 ~0.135	13,500 ~15,750	200 ~715	64 ~74	0.007 ~0.023	0.07 ~0.135
1.6	14,200 ~17,950	380 ~1,075	71 ~90	0.013 ~0.03	0.075 ~0.145	13,350 ~14,650	200 ~715	68 ~74	0.007 ~0.024	0.075 ~0.145
1.8	13,250 ~17,000	380 ~1,075	75 ~96	0.014 ~0.032	0.08 ~0.16	12,300 ~13,050	200 ~715	70 ~74	0.008 ~0.027	0.08 ~0.16
2	11,800 ~14,650	380 ~1,075	74 ~92	0.016 ~0.037	0.09 ~0.18	11,050 ~11,950	200 ~715	69 ~75	0.009 ~0.03	0.09 ~0.18
2.5	9,450 ~12,300	380 ~1,075	74 ~97	0.02 ~0.044	0.112 ~0.235	8,600 ~ 9,800	200 ~715	68 ~77	0.012 ~0.036	0.112 ~0.235
3	8,050 ~ 9,900	380 ~1,075	76 ~93	0.024 ~0.054	0.135 ~0.27	7,350 ~ 8,150	200 ~715	69 ~77	0.014 ~0.044	0.135 ~0.27
4	6,150 ~ 7,550	380 ~1,075	77 ~95	0.031 ~0.071	0.18 ~0.36	5,550 ~ 6,000	200 ~715	70 ~75	0.018 ~0.06	0.18 ~0.36
5	4,750 ~ 6,150	380 ~1,075	75 ~97	0.04 ~0.087	0.225 ~0.45	4,300 ~ 4,900	200 ~715	68 ~77	0.023 ~0.073	0.225 ~0.45
6	4,250 ~ 5,200	380 ~1,075	80 ~98	0.045 ~0.103	0.27 ~0.54	3,700 ~ 4,350	200 ~715	70 ~82	0.027 ~0.082	0.27 ~0.54

GMHRH-2

Side Milling

Recommended Cutting Condition

Work material	Low Alloy Steels									
	(10 ~ 29HRC)					(32 ~ 38HRC)				
OD	RPM	Feed	Vc	fz	Cutting Depth	RPM	Feed	Vc	fz	Cutting Depth
	min^{-1}	mm/min	m/min	mm	ap mm	min^{-1}	mm/min	m/min	mm	ap mm
0.4	40,550 ~45,650	275 ~ 530	51 ~57	0.003 ~0.006	0.007 ~0.018	29,500 ~32,600	125 ~410	37 ~41	0.002 ~0.006	0.007 ~0.018
0.5	31,200 ~39,700	275 ~ 530	49 ~62	0.004 ~0.007	0.009 ~0.022	29,500 ~32,600	125 ~410	46 ~51	0.002 ~0.006	0.009 ~0.022
0.6	31,200 ~39,700	340 ~ 690	59 ~75	0.005 ~0.009	0.011 ~0.026	29,500 ~32,600	115 ~530	56 ~61	0.002 ~0.008	0.011 ~0.026
0.7	31,200 ~39,700	340 ~ 690	69 ~87	0.005 ~0.009	0.012 ~0.031	29,500 ~32,600	115 ~530	65 ~72	0.002 ~0.008	0.012 ~0.031
0.8	26,950 ~34,950	380 ~ 795	68 ~88	0.007 ~0.011	0.014 ~0.035	25,200 ~28,250	125 ~580	63 ~71	0.002 ~0.01	0.014 ~0.035
0.9	24,550 ~31,200	380 ~ 550	69 ~88	0.008 ~0.009	0.03 ~0.06	23,350 ~26,100	170 ~650	66 ~74	0.004 ~0.012	0.03 ~0.06
1	22,700 ~28,350	380 ~ 550	71 ~89	0.008 ~0.01	0.045 ~0.09	20,250 ~22,800	200 ~715	64 ~72	0.005 ~0.016	0.045 ~0.09
1.2	18,450 ~22,700	380 ~1,075	70 ~86	0.01 ~0.024	0.055 ~0.1	17,200 ~18,450	200 ~715	65 ~70	0.006 ~0.019	0.055 ~0.1
1.4	16,050 ~19,850	380 ~1,075	71 ~87	0.012 ~0.027	0.062 ~0.125	14,750 ~16,300	200 ~715	65 ~72	0.007 ~0.022	0.062 ~0.125
1.5	14,650 ~18,900	380 ~1.075	69 ~89	0.013 ~0.028	0.07 ~0.135	13,500 ~15,750	200 ~715	64 ~74	0.007 ~0.023	0.07 ~0.135
1.6	14,200 ~17,950	380 ~1,075	71 ~90	0.013 ~0.03	0.075 ~0.145	13,500 ~14,650	200 ~715	68 ~74	0.007 ~0.024	0.075 ~0.145
1.8	13,250 ~17,000	380 ~1,075	75 ~96	0.014 ~0.032	0.08 ~0.16	12,300 ~13,050	200 ~715	70 ~74	0.008 ~0.027	0.08 ~0.16
2	11,800 ~14,650	380 ~1,075	74 ~92	0.016 ~0.037	0.09 ~0.18	11,050 ~11,950	200 ~715	69 ~75	0.009 ~0.03	0.09 ~0.18
2.5	9,450 ~12,300	380 ~1,075	74 ~97	0.02 ~0.044	0.112 ~0.235	8,600 ~ 9,800	200 ~715	68 ~77	0.012 ~0.036	0.112 ~0.235
3	8,050 ~ 9,900	380 ~1,075	76 ~93	0.024 ~0.054	0.135 ~0.27	7,350 ~ 8,150	200 ~715	69 ~77	0.014 ~0.044	0.135 ~0.27
4	6,150 ~ 7,550	380 ~1,075	77 ~95	0.031 ~0.071	0.18 ~0.36	5,550 ~ 6,000	200 ~715	70 ~75	0.018 ~0.06	0.18 ~0.36
5	4,750 ~ 6,150	380 ~1,075	75 ~97	0.04 ~0.087	0.225 ~0.45	4,300 ~ 4,900	200 ~715	68 ~77	0.023 ~0.073	0.225 ~0.45
6	4,250 ~ 5,200	380 ~1,075	80 ~98	0.045 ~0.103	0.27 ~0.54	3,700 ~ 4,350	200 ~715	70 ~82	0.027 ~0.082	0.27 ~0.54

GMHRH-2

Side Milling

Recommended Cutting Condition

Work material	High Alloyed Steels ·Tool Steels									
	(～ 15HRC)					(～ 35HRC)				
OD	RPM	Feed	Vc	fz	Cutting Depth	RPM	Feed	Vc	fz	Cutting Depth
	min^{-1}	mm/min	m/min	mm	ap mm	min^{-1}	mm/min	m/min	mm	ap mm
0.4	40,550 ～45,650	275 ～ 530	51 ～57	0.003 ～0.006	0.007 ～0.018	29,500 ～32,600	125 ～410	37 ～41	0.002 ～0.006	0.007 ～0.018
0.5	31,200 ～39,700	275 ～ 530	49 ～62	0.004 ～0.007	0.009 ～0.022	29,500 ～32,600	125 ～410	46 ～51	0.002 ～0.006	0.009 ～0.022
0.6	31,200 ～39,700	340 ～ 690	59 ～75	0.005 ～0.009	0.011 ～0.026	29,500 ～32,600	115 ～530	56 ～61	0.002 ～0.008	0.011 ～0.026
0.7	31,200 ～39,700	340 ～ 690	69 ～87	0.005 ～0.009	0.012 ～0.031	29,500 ～32,600	115 ～530	65 ～72	0.002 ～0.008	0.012 ～0.031
0.8	26,950 ～34,950	380 ～ 795	68 ～88	0.007 ～0.011	0.014 ～0.035	25,200 ～28,250	125 ～580	63 ～71	0.002 ～0.01	0.014 ～0.035
0.9	24,550 ～31,200	380 ～ 550	69 ～88	0.008 ～0.009	0.03 ～0.06	23,350 ～26,100	170 ～650	66 ～74	0.004 ～0.012	0.03 ～0.06
1	22,700 ～28,350	380 ～ 550	71 ～89	0.008 ～0.01	0.045 ～0.09	20,250 ～22,800	200 ～715	64 ～72	0.005 ～0.016	0.045 ～0.09
1.2	18,450 ～22,700	380 ～1,075	70 ～86	0.01 ～0.024	0.055 ～0.1	17,200 ～18,450	200 ～715	65 ～70	0.006 ～0.019	0.055 ～0.1
1.4	16,050 ～19,850	380 ～1,075	71 ～87	0.012 ～0.027	0.062 ～0.125	14,750 ～16,300	200 ～715	65 ～72	0.007 ～0.022	0.062 ～0.125
1.5	14,650 ～18,900	380 ～1,075	69 ～89	0.013 ～0.028	0.07 ～0.135	13,500 ～15,750	200 ～715	64 ～74	0.007 ～0.023	0.07 ～0.135
1.6	14,200 ～17,950	380 ～1,075	71 ～90	0.013 ～0.03	0.075 ～0.145	13,500 ～14,650	200 ～715	68 ～74	0.007 ～0.024	0.075 ～0.145
1.8	13,250 ～17,000	380 ～1,075	75 ～96	0.014 ～0.032	0.08 ～0.16	12,300 ～13,050	200 ～715	70 ～74	0.008 ～0.027	0.08 ～0.16
2	11,800 ～14,650	380 ～1,075	74 ～92	0.016 ～0.037	0.09 ～0.18	11,050 ～11,950	200 ～715	69 ～75	0.009 ～0.03	0.09 ～0.18
2.5	9,450 ～12,300	380 ～1,075	74 ～97	0.02 ～0.044	0.112 ～0.235	8,600 ～ 9,800	200 ～715	68 ～77	0.012 ～0.036	0.112 ～0.235
3	8,050 ～ 9,900	380 ～1,075	76 ～93	0.024 ～0.054	0.135 ～0.27	7,350 ～ 8,150	200 ～715	69 ～77	0.014 ～0.044	0.135 ～0.27
4	6,150 ～ 7,550	380 ～1,075	77 ～95	0.031 ～0.071	0.18 ～0.36	5,550 ～ 6,000	200 ～715	70 ～75	0.018 ～0.06	0.18 ～0.36
5	4,750 ～ 6,150	380 ～1,075	75 ～97	0.04 ～0.087	0.225 ～0.45	4,300 ～ 4,900	200 ～715	68 ～77	0.023 ～0.073	0.225 ～0.45
6	4,250 ～ 5,200	380 ～1,075	80 ～98	0.045 ～0.103	0.27 ～0.54	3,700 ～ 4,350	200 ～715	70 ～82	0.027 ～0.082	0.27 ～0.54

GMHRH-2

Side Milling

Recommended Cutting Condition

Work material	Hardened Steels · Hardened Cast Iron (～55HRC)					Chilled Cast Iron (～42HRC)				
OD	RPM min^{-1}	Feed mm/min	Vc m/min	fz mm	Cutting Depth ap mm	RPM min^{-1}	Feed mm/min	Vc m/min	fz mm	Cutting Depth ap mm
0.4	18,450 ～19,550	40 ～110	23 ～25	0.001 ～0.003	0.004 ～0.008	29,500 ～32,600	125 ～410	37 ～41	0.002 ～0.006	0.007 ～0.018
0.5	18,450 ～19,550	40 ～110	29 ～31	0.001 ～0.003	0.004 ～0.009	29,500 ～32,600	125 ～410	46 ～51	0.002 ～0.006	0.009 ～0.022
0.6	18,450 ～19,550	55 ～130	35 ～37	0.001 ～0.003	0.005 ～0.011	29,500 ～32,600	115 ～530	56 ～61	0.002 ～0.008	0.011 ～0.026
0.7	18,450 ～19,550	55 ～130	41 ～43	0.001 ～0.003	0.006 ～0.013	29,500 ～32,600	115 ～530	65 ～72	0.002 ～0.008	0.012 ～0.031
0.8	15,950 ～16,850	60 ～150	40 ～42	0.002 ～0.004	0.007 ～0.015	25,200 ～28,250	125 ～530	63 ～71	0.002 ～0.01	0.014 ～0.035
0.9	14,150 ～14,650	70 ～160	40 ～41	0.002 ～0.005	0.008 ～0.016	23,350 ～26,100	170 ～650	66 ～74	0.004 ～0.012	0.03 ～0.06
1	12,900 ～14,650	95 ～160	41 ～46	0.004 ～0.005	0.009 ～0.018	20,250 ～22,800	200 ～715	64 ～72	0.005 ～0.016	0.045 ～0.09
1.2	11,050 ～11,950	95 ～160	42 ～45	0.004 ～0.007	0.01 ～0.022	17,200 ～18,450	200 ～715	65 ～70	0.006 ～0.019	0.055 ～0.1
1.4	9,200 ～10,300	95 ～160	40 ～45	0.005 ～0.008	0.012 ～0.025	14,750 ～16,300	200 ～715	65 ～72	0.007 ～0.022	0.062 ～0.125
1.5	8,600 ～ 8,250	95 ～160	41 ～44	0.006 ～0.009	0.014 ～0.028	13,500 ～15,750	200 ～715	64 ～74	0.007 ～0.023	0.07 ～0.135
1.6	8,000 ～ 9,250	95 ～160	40 ～46	0.006 ～0.009	0.015 ～0.03	13,500 ～14,650	200 ～715	68 ～74	0.007 ～0.024	0.075 ～0.145
1.8	7,350 ～ 8,150	95 ～160	42 ～46	0.006 ～0.001	0.016 ～0.032	12,300 ～13,050	200 ～715	70 ～74	0.008 ～0.027	0.08 ～0.16
2	6,750 ～ 7,600	95 ～160	42 ～48	0.007 ～0.011	0.018 ～0.035	11,050 ～11,950	200 ～715	69 ～75	0.009 ～0.03	0.09 ～0.18
2.5	5,550 ～ 6,000	95 ～160	44 ～47	0.009 ～0.013	0.022 ～0.045	8,600 ～ 98,00	200 ～715	68 ～77	0.012 ～0.036	0.112 ～0.235
3	4,300 ～ 4,900	95 ～160	41 ～46	0.011 ～0.016	0.028 ～0.055	7,350 ～ 8,150	200 ～715	69 ～77	0.014 ～0.044	0.135 ～0.27
4	3,300 ～ 3,800	95 ～160	41 ～48	0.014 ～0.021	0.036 ～0.072	5,550 ～ 6,000	200 ～715	70 ～75	0.018 ～0.06	0.18 ～0.36
5	2,700 ～ 3,050	95 ～160	42 ～48	0.018 ～0.026	0.045 ～0.09	4,300 ～ 4,900	200 ～715	68 ～77	0.023 ～0.073	0.225 ～0.45
6	2,450 ～ 3,250	95 ～160	46 ～61	0.019 ～0.025	0.054 ～0.108	3,700 ～ 4,350	200 ～715	70 ～82	0.027 ～0.082	0.27 ～0.54

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Recommended Cutting Condition

Work material	Non-Alloy Steels									
	(~ 28HRC)					(~ 32HRC)				
OD	RPM	Feed	Vc	fz	Cutting Depth	RPM	Feed	Vc	fz	Cutting Depth
	min^{-1}	mm/min	m/min	mm	ap mm	min^{-1}	mm/min	m/min	mm	ap mm
0.2	40,550 ~45,650	245 ~590	51 ~ 57	0.003 ~0.006	0.018 ~0.036	29,500 ~32,600	125 ~325	37 ~41	0.002 ~0.005	0.018 ~0.036
0.25	40,450 ~45,650	245 ~590	64 ~ 72	0.003 ~0.006	0.023 ~0.045	29,500 ~32,600	125 ~325	46 ~51	0.002 ~0.005	0.023 ~0.045
0.3	40,550 ~45,650	310 ~760	76 ~ 86	0.004 ~0.008	0.027 ~0.054	29,500 ~32,600	145 ~420	56 ~61	0.002 ~0.006	0.027 ~0.054
0.4	40,750 ~45,650	310 ~760	102 ~115	0.004 ~0.008	0.036 ~0.072	29,500 ~32,600	145 ~405	74 ~82	0.002 ~0.006	0.036 ~0.072
0.5	36,850 ~41,300	340 ~835	116 ~130	0.005 ~0.01	0.045 ~0.09	27,050 ~29,350	170 ~465	85 ~92	0.003 ~0.008	0.045 ~0.09
0.6	30,700 ~34,800	340 ~935	116 ~131	0.006 ~0.013	0.055 ~0.1	22,100 ~25,000	170 ~465	83 ~94	0.004 ~0.009	0.055 ~0.1
0.7	27,050 ~29,350	340 ~935	119 ~129	0.006 ~0.016	0.062 ~0.125	19,650 ~20,650	170 ~465	86 ~91	0.004 ~0.011	0.062 ~0.125
0.75	23,450 ~27,150	340 ~935	111 ~128	0.007 ~0.017	0.07 ~0.135	17,800 ~20,100	170 ~465	84 ~95	0.005 ~0.012	0.07 ~0.135
0.8	23,350 ~27,150	340 ~935	117 ~136	0.007 ~0.017	0.075 ~0.145	17,200 ~19,000	170 ~465	86 ~96	0.005 ~0.012	0.075 ~0.145
0.9	22,150 ~25,000	340 ~935	125 ~141	0.008 ~0.019	0.08 ~0.16	15,350 ~17,400	170 ~465	87 ~98	0.006 ~0.013	0.08 ~0.16
1	19,650 ~21,750	340 ~935	123 ~137	0.009 ~0.021	0.09 ~0.18	14,150 ~15,750	170 ~465	89 ~99	0.006 ~0.015	0.09 ~0.18
1.5	13,500 ~15,200	340 ~935	127 ~143	0.013 ~0.031	0.135 ~0.27	9,200 ~10,300	170 ~465	87 ~97	0.009 ~0.023	0.135 ~0.27

Work material	Low Alloy Steels									
	(10 ~ 28HRC)					(32 ~ 38HRC)				
OD	RPM	Feed	Vc	fz	Cutting Depth	RPM	Feed	Vc	fz	Cutting Depth
	min^{-1}	mm/min	m/min	mm	ap mm	min^{-1}	mm/min	m/min	mm	ap mm
0.2	40,550 ~45,650	245 ~590	51 ~ 57	0.003 ~0.006	0.018 ~0.036	29,500 ~32,600	125 ~325	37 ~41	0.002 ~0.005	0.018 ~0.036
0.25	40,450 ~45,650	245 ~590	64 ~ 72	0.003 ~0.006	0.023 ~0.045	29,500 ~32,600	125 ~325	46 ~51	0.002 ~0.005	0.023 ~0.045
0.3	40,550 ~45,650	310 ~760	76 ~ 86	0.004 ~0.008	0.027 ~0.054	29,500 ~32,600	145 ~420	56 ~61	0.002 ~0.006	0.027 ~0.054
0.4	40,750 ~45,650	310 ~760	102 ~115	0.004 ~0.008	0.036 ~0.072	29,500 ~32,600	145 ~405	74 ~82	0.002 ~0.006	0.036 ~0.072
0.5	36,850 ~41,300	340 ~835	116 ~130	0.005 ~0.01	0.045 ~0.09	27,050 ~29,350	170 ~465	85 ~92	0.003 ~0.008	0.045 ~0.09
0.6	30,700 ~34,800	340 ~935	116 ~131	0.006 ~0.013	0.055 ~0.1	22,100 ~25,000	170 ~465	83 ~94	0.004 ~0.009	0.055 ~0.1
0.7	27,050 ~29,350	340 ~935	119 ~129	0.006 ~0.016	0.062 ~0.125	19,650 ~20,650	170 ~465	86 ~91	0.004 ~0.011	0.062 ~0.125
0.75	23,450 ~27,150	340 ~935	111 ~128	0.007 ~0.017	0.07 ~0.135	17,800 ~20,100	170 ~465	84 ~95	0.005 ~0.012	0.07 ~0.135
0.8	23,350 ~27,150	340 ~935	117 ~136	0.007 ~0.017	0.075 ~0.145	17,200 ~19,000	170 ~465	86 ~96	0.005 ~0.012	0.075 ~0.145
0.9	22,150 ~25,000	340 ~935	125 ~141	0.008 ~0.019	0.08 ~0.16	15,350 ~17,400	170 ~465	87 ~98	0.006 ~0.013	0.08 ~0.16
1	19,650 ~21,750	340 ~935	123 ~137	0.009 ~0.021	0.09 ~0.18	14,150 ~15,750	170 ~465	89 ~99	0.006 ~0.015	0.09 ~0.18
1.5	13,500 ~15,200	340 ~935	127 ~143	0.013 ~0.031	0.135 ~0.27	9,200 ~10,300	170 ~465	87 ~97	0.009 ~0.023	0.135 ~0.27

GMRBH-2

Recommended Cutting Condition

Work material	High Alloyed Steels ·Tool Steels									
	(～ 15HRC)					(～ 35HRC)				
OD	RPM	Feed	Vc	fz	Cutting Depth	RPM	Feed	Vc	fz	Cutting Depth
	min^{-1}	mm/min	m/min	mm	ap mm	min^{-1}	mm/min	m/min	mm	ap mm
0.2	40,550 ～45,650	245 ～590	51 ～ 57	0.003 ～0.006	0.018 ～0.036	29,500 ～32,600	125 ～325	37 ～41	0.002 ～0.005	0.018 ～0.036
0.25	40,450 ～45,650	245 ～590	64 ～ 72	0.003 ～0.006	0.023 ～0.045	29,500 ～32,600	125 ～325	46 ～51	0.002 ～0.005	0.023 ～0.045
0.3	40,550 ～45,650	310 ～760	76 ～ 86	0.004 ～0.008	0.027 ～0.054	29,500 ～32,600	145 ～420	56 ～61	0.002 ～0.006	0.027 ～0.054
0.4	40,750 ～45,650	310 ～760	102 ～115	0.004 ～0.008	0.036 ～0.072	29,500 ～32,600	145 ～405	74 ～82	0.002 ～0.006	0.036 ～0.072
0.5	36,850 ～41,300	340 ～835	116 ～130	0.005 ～0.01	0.045 ～0.09	27,050 ～29,350	170 ～465	85 ～92	0.003 ～0.008	0.045 ～0.09
0.6	30,700 ～34,800	340 ～935	116 ～131	0.006 ～0.013	0.055 ～0.1	22,100 ～25,000	170 ～465	83 ～94	0.004 ～0.009	0.055 ～0.1
0.7	27,050 ～29,350	340 ～935	119 ～129	0.006 ～0.016	0.062 ～0.125	19,650 ～20,650	170 ～465	86 ～91	0.004 ～0.011	0.062 ～0.125
0.75	23,450 ～27,150	340 ～935	111 ～128	0.007 ～0.017	0.07 ～0.135	17,800 ～20,100	170 ～465	84 ～95	0.005 ～0.012	0.07 ～0.135
0.8	23,350 ～27,150	340 ～935	117 ～136	0.007 ～0.017	0.075 ～0.145	17,200 ～19,000	170 ～465	86 ～96	0.005 ～0.012	0.075 ～0.145
0.9	22,150 ～25,000	340 ～935	125 ～141	0.008 ～0.019	0.08 ～0.16	15,350 ～17,400	170 ～465	87 ～98	0.006 ～0.013	0.08 ～0.16
1	19,650 ～21,750	340 ～935	123 ～137	0.009 ～0.021	0.09 ～0.18	14,150 ～15,750	170 ～465	89 ～99	0.006 ～0.015	0.09 ～0.18
1.5	13,500 ～15,200	340 ～935	127 ～143	0.013 ～0.031	0.135 ～0.27	9,200 ～10,300	170 ～465	87 ～97	0.009 ～0.023	0.135 ～0.27

Work material	Hardened Steels · Hardened Cast Iron					Chilled Cast Iron				
	(～ 55HRC)					(～ 42HRC)				
OD	RPM	Feed	Vc	fz	Cutting Depth	RPM	Feed	Vc	fz	Cutting Depth
	min^{-1}	mm/min	m/min	mm	ap mm	min^{-1}	mm/min	m/min	mm	ap mm
0.2	18,450 ～20,650	125 ～215	23 ～26	0.003 ～0.005	0.004 ～0.007	29,500 ～32,600	125 ～325	37 ～41	0.002 ～0.005	0.018 ～0.036
0.25	18,450 ～20,650	125 ～215	29 ～32	0.003 ～0.005	0.005 ～0.009	29,500 ～32,600	125 ～325	46 ～51	0.002 ～0.005	0.023 ～0.045
0.3	18,450 ～20,650	145 ～270	35 ～39	0.004 ～0.007	0.005 ～0.011	29,500 ～32,600	145 ～420	56 ～61	0.002 ～0.006	0.027 ～0.054
0.4	18,450 ～20,650	145 ～270	46 ～52	0.004 ～0.007	0.007 ～0.014	29,500 ～32,600	145 ～405	74 ～82	0.002 ～0.006	0.036 ～0.072
0.5	16,600 ～19,000	170 ～305	52 ～60	0.005 ～0.008	0.009 ～0.018	27,050 ～29,350	170 ～465	85 ～92	0.003 ～0.008	0.045 ～0.09
0.6	14,150 ～15,750	170 ～295	53 ～59	0.006 ～0.009	0.01 ～0.022	22,100 ～25,000	170 ～465	83 ～94	0.004 ～0.009	0.055 ～0.1
0.7	12,300 ～13,500	170 ～295	54 ～59	0.007 ～0.011	0.012 ～0.025	19,650 ～20,650	170 ～465	86 ～91	0.004 ～0.011	0.062 ～0.125
0.75	11,650 ～12,400	170 ～295	55 ～58	0.007 ～0.012	0.014 ～0.028	17,800 ～20,100	170 ～465	84 ～95	0.005 ～0.012	0.07 ～0.135
0.8	11,050 ～11,950	170 ～295	56 ～60	0.008 ～0.012	0.015 ～0.03	17,200 ～19,000	170 ～465	86 ～96	0.005 ～0.012	0.075 ～0.145
0.9	9,850 ～10,850	170 ～305	56 ～61	0.009 ～0.014	0.016 ～0.032	15,350 ～17,400	170 ～465	87 ～98	0.006 ～0.013	0.08 ～0.16
1	9,200 ～ 9,800	170 ～305	58 ～61	0.009 ～0.016	0.018 ～0.035	14,150 ～15,750	170 ～465	89 ～99	0.006 ～0.015	0.09 ～0.18
1.5	6,150 ～ 6,500	170 ～305	58 ～61	0.014 ～0.023	0.028 ～0.055	9,200 ～10,300	170 ～465	87 ～97	0.009 ～0.023	0.135 ～0.27